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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,361	01/31/2002	Liang-Sheng L. Liao	83483RLO	2925

7590 11/05/2003

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EXAMINER

GARRETT, DAWN L

ART UNIT PAPER NUMBER

1774

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Applicati n No.

10/062,361

Applicant(s)

LIAO ET AL.

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Response to Amendment***

1. This Office action is in response to the amendment mailed August 27, 2003, paper no. 5. Claim 1 was amended. Claim 14 was cancelled. Claims 1-13, 15, and 16 are pending.
2. The objection to claim 1 set forth in paper no. 4 (mailed July 1, 2003), paragraph 1, is withdrawn due to the amendment of claim 1.
3. The rejection of claims 1, 6, 12, 13, and 16 under 35 USC 102(b) as being anticipated by Matsuura et al. (US 5,516,577) set forth in paper no. 4, paragraph 3, is maintained.
4. The rejection of claims 1, 5, and 12-16 under 35 USC 102(b) as being anticipated by Namiki et al. (US 5,457,565) set forth in paper no. 4, paragraph 4, is withdrawn.
5. The rejection of claims 1, 2, 4, and 12-16 under 35 USC 102(b) as being anticipated by Wakimoto et al. (US 5,739,635) set forth in paper no. 4, paragraph 5, is maintained.
6. The rejection of claims 1-6 and 9-16 under 35 USC 102(e) as being anticipated by Nakamura et al. (US 6,509,109) set forth in paper no. 4, paragraph 6, is withdrawn.
7. The rejection of claims 1-3, 6, 9, 10, and 12-16 under 35 USC 103(a) as being unpatentable over Kido et al. (US 6,013,384) is withdrawn.
8. Claims 7 and 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the

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limitations of the base claim and any intervening claims for the reasons previously set forth in paper no. 4, paragraph 9.

9. Claims 3, 5, and 9-11 would also be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Claim Rejections - 35 USC § 112***

10. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

11. Claims 1-13, 15, and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is not seen where the specification supports the added negative limitation in independent claim 1 of an adhesion-promoting layer "including inorganic materials, but excluding organic materials". Applicant is respectfully requested to indicate where support for the added limitation may be found. At this time, the limitation is considered to be new matter.

12. Claims 1-13, 15, and 16 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for some specific inorganic materials, does not reasonably provide enablement for all inorganic materials. The specification

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does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

***Response to Arguments***

13. Applicant's arguments filed August 27, 2003 have been fully considered but they are not persuasive. With regard to the rejection over Matsuura, applicant states "...Matsuura et al. specifies that the adhesive layer comprises compounds such as bis(benzo-8-quinolinol)zinc...Amended claim 1 excludes the use of organic metal compounds in the adhesion-promoting layer." The examiner respectfully disagrees with applicant that claim 1 now excludes "organic metal compounds". Claim 1 recites "organic materials". The organometallic compounds disclosed by Matsuura et al. are considered to be inorganic compounds. Applicant has not specifically limited claim 1 to only include inorganic transition metals or inorganic transition metal compounds. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant further argues Matsuura et al. does not recognize Mg has an adhesion problem. The examiner submits Matsuura et al. teaches all components of the device as presently claimed and it is not necessary that Matsuura et al. recognizes the same problem as applicant. The materials of the cathode and the layer adjacent to it are the same regardless of why such a combination was selected. The examiner disagrees with applicants' statement "The Matsuura et al. invention has nothing to do with the use of Mg." At col. 3, lines 6-11, magnesium is specifically listed as a cathode material.

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With regard to the rejection over Namiki et al. (US 5,457,565), applicants' arguments are moot in view of the withdrawal of the rejection. Namiki et al. teach away from the use of a low work function cathode such as magnesium.

With regard to the rejection over Wakimoto et al., applicants argue Wakimoto uses high work function cathodes. The examiner respectfully disagrees. Although Mg is not shown in the only example (col. 4, lines 22-27), magnesium is one of four metals specifically taught as a lower work function metal for the cathode (see col. 3, lines 17-19). Applicant further argues Wakimoto is concerned with forming an insulating layer between the metal cathode and the organic layer and is not concerned with the adhesion problem associated with Mg. The examiner submits the materials of the Wakimoto layers read upon the materials of the instant device as presently claimed. The reason for forming a layer adjacent the cathode is not patentably significant as the material of Wakimoto reads upon the instant adhesion-promoting layer as presently claimed.

With regard to the rejection over Nakamura et al., applicants' arguments are moot in view of the withdrawal of the rejection due to the amendment. The electron injection region of Nakamura contains organic compounds. Applicants are reminded of the new matter rejection with regard to the added negative limitation to exclude organic compounds from the adhesion promoting layer.

With regard to the rejection over Kido, applicants' arguments are moot in view of the withdrawal of the rejection.

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**Conclusion**

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (703)305-0788. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached at (703)-308-0449. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2351.

*DG*

D.G.

November 3, 2003

CYNTHIA H. KELLY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

*Cynthia H. Kelly*